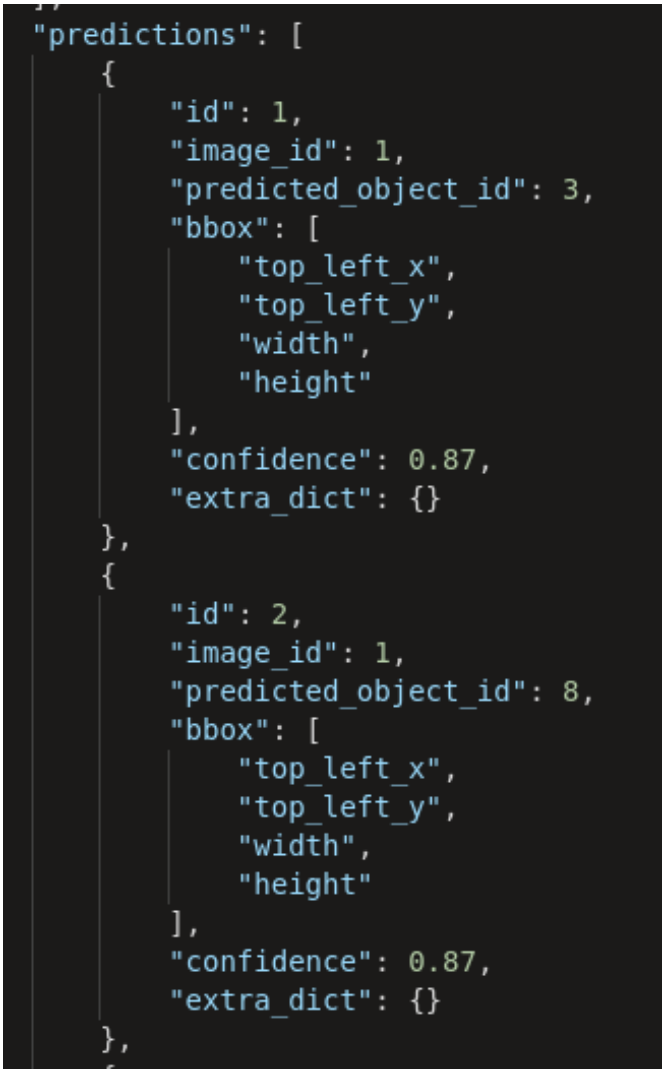
Updated Guidelines for output format

Since there were quite a few questions/doubts related to the output format, we are updating the current output format and providing an additional standard format output option.

Originally, your script needed to output in the following format as a JSON file, as described in the previous README whose details can be found here.

First, let's look at the updates made to the current format,

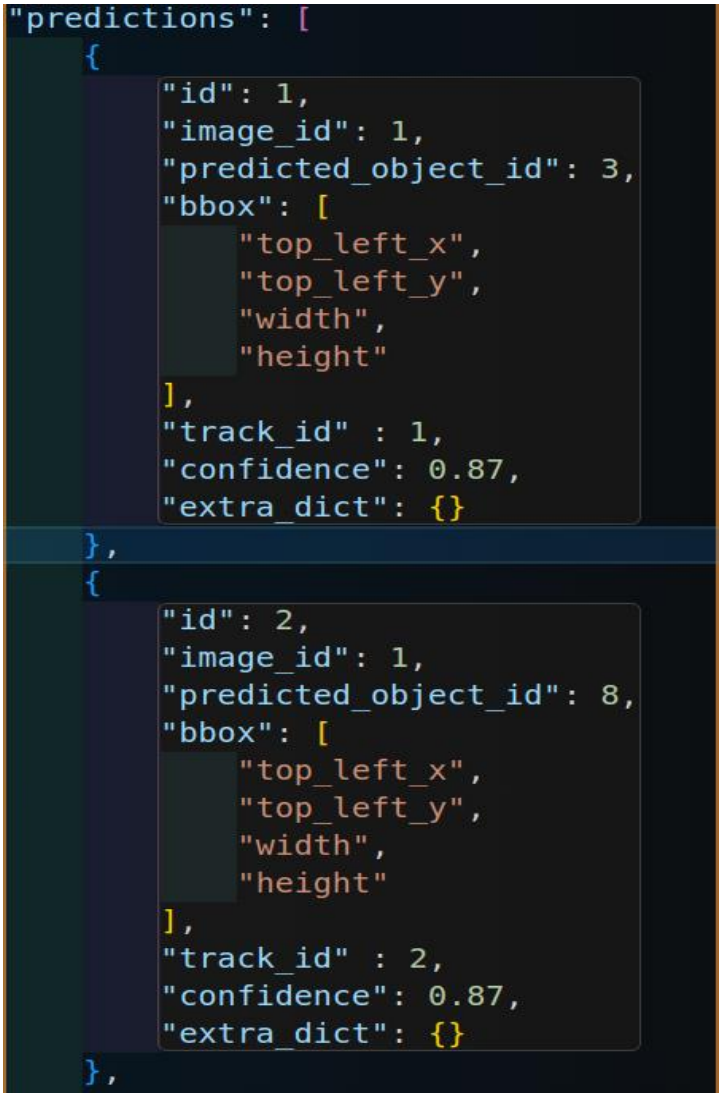
Below is the prediction section in the current output format.



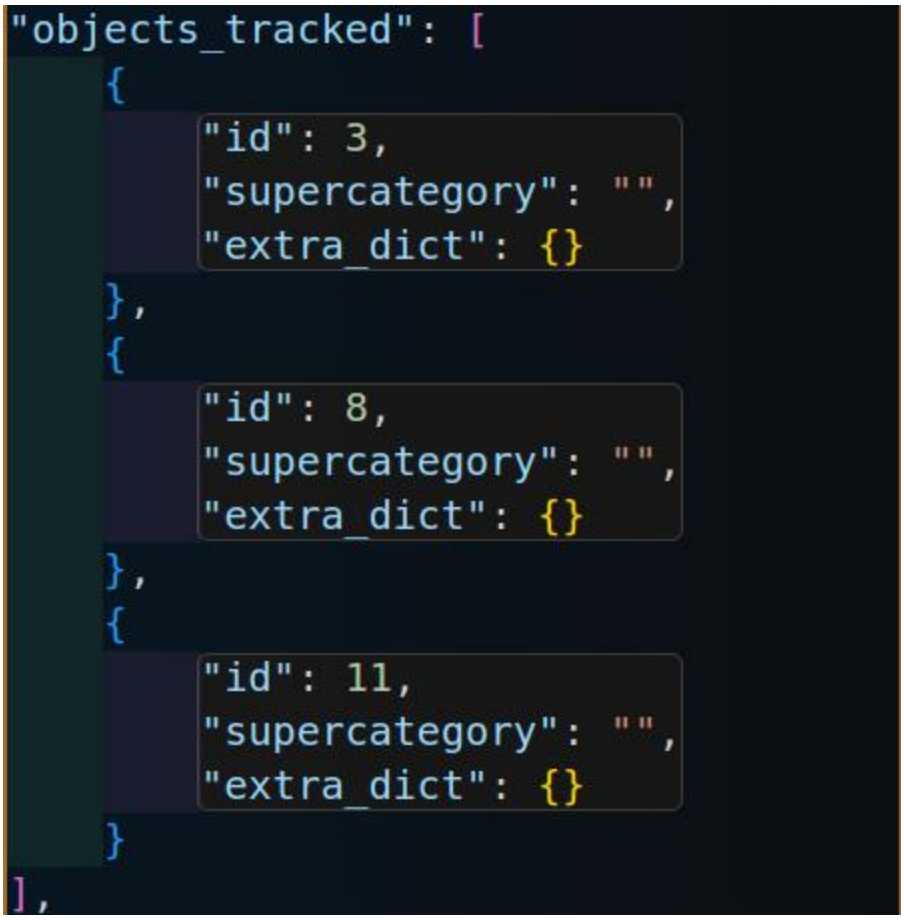
```
"predictions": [
    {
        "id": 1,
        "image_id": 1,
        "predicted_object_id": 3,
        "bbox": [
            "top_left_x",
            "top_left_y",
            "width",
            "height"
        ],
        "confidence": 0.87,
        "extra_dict": {}
    },
    {
        "id": 2,
        "image_id": 1,
        "predicted_object_id": 8,
        "bbox": [
            "top_left_x",
            "top_left_y",
            "width",
            "height"
        ],
        "confidence": 0.87,
        "extra_dict": {}
    },
```

This format is generalized, and ID of the object tracked is assigned to the "predicted_object_id", so when the object goes out of the frame and comes back after a few frames the "predicted_object_id" would be the same if the re-identification is implemented. If just tracking and no re-identification done, then "predicted_object_id" would be different but will continue to be the same till it gets occluded or goes out of frame.

We believe this created a bit of confusion among few participants and so we are updating the format. Thus, now you need to have an additional “track_id” as shown below



track_id and predicted_object_id essentially convey the same information, but this stands in line with the standard formats in terms of naming convention. So now you can assign the track_id using your tracking framework and predicted_object_id using your reidentifation and don’t forget to populate the “objects_tracked” section



This is meta information you need to populate about what objects you are tracking, and this is useful for us to understand what ID you are assigning to which categories.

If you are still confused with the above format, we are also providing a method to output your results in TAO tracking format, which looks something like this piece below:


```
[
 {
  "id": 0,
  "image_id": 102169,
  "track_id": 1,
  "bbox": [
   310.97088623046875,
   9.972158432006836,
   912.3245239257812,
   708.0175266265869
  ],
  "score": 0.9741089940071106,
  "category_id": 805
 },
 {
  "id": 1,
  "image_id": 102170,
  "track_id": 1,
  "bbox": [
   658.9249877929688,
   1.5969433784484863,
   359.7445068359375,
   714.9733691215515
  ],
  "score": 0.9957672357559204,
  "category_id": 805
 },
```


This is similar to our updated format and the category_id maps to our predicted_object_id and track_id maps to our track_id.

Updated Guidelines for judging criteria

Furthermore, we heard a few questions about the judging criteria and how the various 'essential' and 'bonus' criteria would be used to evaluate submissions. Overall, at the algorithmic performance level of evaluation, we would evaluate tracking and reidentification performance in stage I and stage II, respectively. However, this also led to some confusion.

To make it clearer, here is more information on how we will be weighting these different metrics:

80% to the tracking metric, 15% to the re-identification metric and 5% to the stage III (run on a NVIDIA Jetson AGX Xavier board) metric.

To be more precise the final metric evaluation would be

0.8(tracking metric) + 0.15(re-id metric) + 0.5(metric we get running on Jetson AGX Xavier board)

In other words, focus on creating a solution that excels in the tracking metric first, and then if you can also perform decently well I the re-identification metric, that may distinguish you from similar solutions. Tracking is the primary goal here, but re-ID could boost your entry a little bit.

Please reach out to the challenge Forum with any further questions:

All the best!!!